

**I. REMARKS/ARGUMENTS**

These remarks are submitted in response to the Office Action of October 18, 2007 (Office Action). As this response is timely filed within the 3-month shortened statutory period, no fee is believed due. As a result of this Amendment, claims 1, 3, 7, 8, and 10 have been amended and claim 6 has been cancelled. Claims 1-5, and 7-14 remain in the Application.

The Examiner previously indicated allowance of claims 1-5 and claims 8-14, but now has withdrawn such indication in view of newly discovered references.

The Examiner objected to claims 1-14 due to minor informalities which now have been corrected.

In paragraph 5, at page 4 of the Office Action, Claims 10-14 were rejected under 35 U.S.C. section 101, because the claimed invention is directed to non-statutory subject matter. Claim 10 now recites a processor that performs the recited steps.

In paragraph 8, at page 5 of the Office Action, Claims 1-5, 8-9 were rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Application Publication No. 2003/0171128 A1 to Tandai *et al.* (hereinafter Tandai) in view of U.S. Patent Application Publication No. 2004/0141548 A1 to Shattil (hereinafter Shattil).

In paragraph 9, at page 7 of the Office Action, Claims 10-12 were rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Application Publication No. 2004/0184398 A1 to Walton *et al.* (hereinafter Walton) in view of Shattil.

In paragraph 10, at page 9 of the Office Action, Claims 13 and 14 were rejected under 35 U.S.C. 103(a) as being unpatentable over Walton and Shattil as applied to claim 10 above, and further in view of U.S. Patent No. 6,934,340 B1 to Dollard (hereinafter Dollard).

In paragraph 11, at page 10 of the Office Action, Claims 6 and 7 were objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

## **II. The Claims Define Over the Prior Art**

The Applicant has amended claims 1 and 8 to incorporate the element of "a threshold for deciding whether a peak is found is a number which is a magnitude of a first peak times a constant that is a number between 0.7 and 1.0" which the examiner found allowable as part of claim 6. Further, with respect to claims 3-5, the Applicant is unaware that synchronization for failure for finding peaks is known in the art in the context of an OFDM communication system where a convolving step is maintained until a predetermined number of peaks (such as 4 peaks) are found. In any event, the claims now include the elements of claim 6 and thus, Applicant respectfully believes claims 1 and 8 and any remaining dependent claims thereon overcome the pending rejection and are now allowable.

With respect to Claims 10-14, Walton not only fails to teach using polyphase code sequences whose number is the same as half of an IFFT size, and taking FFT signals from a first output to an output signal having half of an FFT size, but Walton further fails to teach the calculation of SNR for each of the subcarriers as recited in claim 10. Walton only discusses the storage of a look-up table 774 for supported transmission modes and their required SNR. This does not indicate that SNRs are calculated for each sub-carrier but instead indicates that an average SNR is calculated. Therefore, even if one were to combine the teachings of Walton with Shattil, such combined teaching would fail to teach or suggest all the elements recited in claim 10. Therefore, claims 10-14 should also be deemed allowable since claim 10 takes Fourier-transformed signals from a first output to an output signal having half of an FFT size and then calculates the signal-to-noise ratio for each sub-carrier with six signals from six Fourier-transformed blocks for the same sub-carrier.

**IV. CONCLUSION**

The claims have been amended for minor informalities and have not been amended to overcome any cited art. Applicants believe that this application is now in full condition for allowance. Allowance is therefore respectfully requested. Applicants request that the Examiner call the undersigned if clarification is needed on any matter within this Amendment, or if the Examiner believes a telephone interview would expedite the prosecution of the subject application to completion.

Respectfully submitted,

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